

DETAILED ACTION

1. This communication is responsive to the amendment filed 07/01/2009 and the telephonic interview on 11/05/2009.

Claims 1-8, 11-16, 18-32, and 34-37 have been examined and allowed.

2. **EXAMINER'S AMENDMENT:**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Daniel Rose (Registration No. 63214) on 11/05/2009.

The application has been amended as follows:

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for associating a file type of a file with one or more programs, the method comprising the steps of:
 - (a) intercepting a request from a process executing on a computing device configured with an isolation environment, the isolation environment comprising a user isolation layer and an application isolation layer, to store in a native configuration store residing on a memory element provided by the computing device file type association information associated with a system scope;
 - (b) determining from the request an application program associated with one of either of a user isolation scope, an application isolation scope and ~~[[a]]~~ the system scope to be associated with a file type in the native configuration store; ~~[[and]]~~
 - (c) writing to the native configuration store, specific to one of either of the user isolation scope, the application isolation scope and the system scope, an association of the file type with a chooser tool;
 - (d) selecting, by a process executing on behalf of a user and in the context of the application isolation scope and the user isolation scope, a file including a file type to invoke the application program, and invoking the chooser tool in response to selecting the file; and
 - (e) displaying by the chooser tool a list of one or more application programs associated with the file type, wherein the chooser tool executes in the context of one of either of the application isolation scope and the user isolation scope, and the list is specific to one of either of the user isolation scope and one or more application isolation scopes.

2. (Original) The method of claim 1, wherein step (a) further comprises intercepting the request by one of a user mode hooking mechanism, a kernel mode hooking mechanism, a file system filter driver, and a mini-driver.
3. (Previously Presented) The method of claim 1, wherein the request comprises updating an entry of a file type association in the native configuration store.
4. (Previously Presented) The method of claim 1, wherein the request comprises creating a new entry of a file type association in the native configuration store.
5. (Currently Amended) The method of claim 1, wherein the chooser tool, executing in the context of ~~[[an]]~~ the application isolation scope and ~~[[a]]~~ the user isolation scope, provides a user interface listing one or more application programs associated with one of either of the user isolation scope, the application isolation scope and a native isolation scope to invoke to access a file associated with the file type.
6. (Currently Amended) The method of claim 1, further comprising the step of: ~~(d)~~ providing an association of the application program associated with one of either of the user isolation scope, the application isolation scope and the system scope with the file type in a configuration store specific to the chooser tool.

7. (Original) The method of claim 6, wherein the configuration store comprises the chooser tool configuration store.

8. (Original) The method of claim 1, wherein the configuration store comprises a registry database.

9. (Canceled).

10. (Canceled).

11. (Currently Amended) The method of claim ~~[[10]]~~ 1, further comprising the step of:
~~(g)~~ invoking, by the chooser tool, a selected application program in one of ~~[[a]]~~ the system scope, an application isolation scope, and a user isolation scope, and wherein the application program is selected from the list specific to one of either of the user isolation scope and the one or more application isolation scopes.

12. (Currently Amended) The method of claim 1, wherein one of the application program, the file, the configuration store, and the chooser tool are associated with one of ~~[[a]]~~ the system scope, ~~[[an]]~~ the application isolation scope, and ~~[[a]]~~ the user isolation scope within ~~[[an]]~~ the isolation environment.

13. (Previously Presented) The method of claim 1, wherein step (c) further comprises writing to the native configuration store an association of the chooser tool as the default application program associated with the file type.

14. (Previously Presented) The method of claim 1, further comprising associating a second file type with the chooser tool in the native configuration store.

15. (Currently Amended) A computer readable medium encoded with computer readable program code for invoking an application program associated with a file type, the program code comprising:

instructions for selecting, by a process executing on behalf of a user in an isolation environment, a file to invoke an application program, the file including a file type, the isolation environment comprising an application isolation layer and a user isolation layer; instructions for obtaining, in response to selecting the file, a reference to a chooser tool associated with the file type from a configuration store, the configuration store comprising file type association information; ~~and~~

instructions for obtaining a list, specific to one of either of a user isolation scope and one or more application isolation scopes, of one or more application programs associated with the file type of the selected file from a chooser tool configuration store; and

instructions for invoking the chooser tool in response to selecting the file, the chooser tool displaying a list of one or more application programs to access the selected file, wherein the one or more application programs are associated with one of either of [[a]]

the user isolation scope, the one or more application isolation scopes, and [[a]] the system scope, and wherein the chooser tool executes in the context of one of either of the one or more application isolation scopes and the user isolation scope.

16. (Previously Presented) The computer readable medium of claim 15, further comprising instructions for selecting the file to invoke the application program by clicking on the file one or more times.

17. (Canceled).

18. (Currently Amended) The computer readable medium of claim ~~47~~ 15, further comprising instructions for the chooser tool displaying at least one of the one or more application programs associated with the file type obtained from the chooser tool configuration store, wherein the one or more application programs are displayed responsive to an isolation scope associated with the process acting on behalf of the user.

19. (Currently Amended) The computer readable medium of claim ~~47~~ 15, wherein the configuration store comprises the chooser tool configuration store.

20. (Previously Presented) The computer readable medium of claim 15, wherein the configuration store comprises a registry database.

21. (Previously Presented) The computer readable medium of claim 15, further comprising instructions for invoking an application program selected from the list displayed by the chooser tool.

22. (Previously Presented) The computer readable medium of claim 21, further comprising instructions for invoking the selected application program in one of a system layer, application isolation layer and a user isolation layer.

23. (Currently Amended) The computer readable medium of claim 15, wherein one of the application program, the file, the configuration store and the chooser tool are associated with one of [[a]] the system scope, [[an]] the one or more application isolation [[scope]] scopes, and [[a]] the user isolation scope within [[an]] the isolation environment.

24. (Previously Presented) The computer readable medium of claim 15, wherein the chooser tool is the default application program associated with the file type in the native configuration store.

25. (Currently Amended) A system including at least one processor for invoking a program associated with a file type, the system comprising:

computer-readable program means for obtaining a request from a process executing on a computing device including an isolation environment to store file type association information in a native configuration store, and determining from the request a file type

to be associated with an application program in the native configuration store, wherein the isolation environment comprises an application isolation layer and a user isolation layer;

computer-readable program means for providing a selection from a list of one or more application programs associated with one of either of [[an]] one or more application isolation [[scope]] scopes and a user isolation scope to invoke for accessing a file associated with the file type, the means for providing a selection executing in the context of one of either of the one or more application isolation scopes and the user isolation scope, and the list specific to one of either of the user isolation scope and one or more application isolation scopes; and

computer-readable program means for writing to the native configuration store to associate the file type with [[the]] a chooser tool.

26. (Previously Presented) The system of claim 25, wherein the computer-readable program means for obtaining a request comprises one of the following to intercept the request: a user mode hooking mechanism, a kernel mode hooking mechanism, a file system filter driver, and a mini-driver.

27. (Previously Presented) The system of claim 25, wherein the computer-readable program means for providing a selection of one or more application programs comprises a user interface to display the selection of the one or more application programs.

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28. (Previously Presented) The system of claim 25, further comprising a chooser tool configuration store for storing an entry associating the file type with the application program of the request.

29. (Previously Presented) The system of claim 28, wherein the computer-readable program means for obtaining a request initiates an action to write the entry to the chooser tool configuration store.

30. (Original) The system of claim 28, wherein the configuration store comprises the chooser tool configuration store.

31. (Original) The system of claim 25, wherein the configuration store comprises a registry database.

32. (Previously Presented) The system of claim 28, wherein the computer-readable program means for providing a selection of one or more application programs displays at least one application program associated with the file type obtained from the chooser tool configuration store, the at least one application program responsive to an isolation scope associated with the computer-readable program means.

33. (Canceled).

34. (Previously Presented) The system of claim 25, further comprising an isolation environment for isolating access by the application program to native resources provided by an operating system.

35. (Previously Presented) The system of claim 34, wherein the isolation environment comprises one of a system layer, an application isolation layer, and a user isolation layer.

36. (Previously Presented) The system of claim 35, wherein one of the application program, the file, the configuration store, and the computer-readable program means for providing a selection of one or more application program execute in one of the system layer, the application isolation layer, and the user isolation layer.

37. (Previously Presented) The system of claim 35, wherein the computer-readable program means for providing a selection of one or more application programs invokes the selected application program in one of the system layer, the application isolation layer, and the user isolation layer.

3. **REASONS FOR ALLOWANCE:**

Claims 1-8, 11-16, 18-32, and 34-37 are allowed.

The following is an examiner's statement of reasons for allowance:

Interpreting the claims in light of the specification, Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art does not expressly teach or render obvious the invention as recited in amended independent claims 1, 15, and 25.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached at (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/

Primary Examiner, Art Unit 2194